TRANSPORTATION

Information about the existing transportation network is essential for transportation planning. Traffic volume and road condition information is used to determine whether road improvements are necessary. Problem areas, such as hazardous intersections and roads need to be identified so that mitigation measures can be planned. New road connections need to be identified before new development eliminates potential alignment alternatives.

Street System

Brunswick is well-connected to the state and interstate highway system, so is easily accessible to and from several directions. U.S. 340, located northwest of the City, provides highway access to Frederick, where connections to U.S. 15, 1-270, and 1-70 are available. To the southwest, U.S. 340 provides connections to Charles Town, West Virginia and northern Virginia. MD 17, which extends east-west along the City's northern boundary, extends north to Burkittsville and Middletown and connects with MD 464 to the east. MD 464 extends east to Point of Rocks, where U.S. 15 and MD 28 can be accessed. The main north-south route through Brunswick, Petersville Road, crosses the Potomac River, providing a connection to Lovettsville, Virginia and extending north to Rosemont and Petersville.

The street system within Brunswick in the older sections of the City is based on a linear grid pattern. However, because the grid pattern was overlaid on the City's steep topography, many of the streets could not be constructed as planned. As a result, the City's street pattern is intermittent and disconnected.

The main north-south road connection through Brunswick is Petersville Road, which extends from Route 17/Souder Road to the downtown and across the Potomac River. It is a two lane road with adequate shoulders and alignments. Other north-south roads in the City include Maple Avenue, Second Avenue, Fourth Avenue, Fifth Avenue, Gum Springs Road, and Ninth Avenue.

Maple Avenue, though adequate in width, has rolling vertical alignment, which causes site distance difficulties at cross street intersections. To the south, Maple Avenue does not provide a direct connection to the downtown area because it ends at B Street.

Second Avenue connects from A Street to Souder Road. Vertical alignment, particularly between B and F Street is extremely steep. Second Avenue is also a narrow street without curbs, gutters and sidewalks.

To the west, Gum Springs Road extends from Potomac Street north to East H Street. This road is characterized by steep vertical alignments as well as curving horizontal alignments. Between Avenue and Gum Springs Road, there are no through north-south connections from Potomac or A Streets north to East H Street. Fourth Avenue connects from A Street to East E Street, Fifth Avenue from East B Street to East H Street, and Sixth Avenue from East E Street to East H Street. Fourth Avenue is very steep in its southern section. Fifth and Sixth Avenues are narrow, without curbs, gutters and sidewalks.

TABLE 16
TRAFFIC VOLUMES: 1965-1990
State Highway, Brunswick Area

Location	1990	1985	1980	1975	1967	1985-90 % Increase
Route 17 Bridge	7,900	6,175	5,400	2,225	1,500	+28%
Petersville Road	4,800	3,600	5,450	4,200	3,525	+33%
Route 180	700	900	1,400	375	5,500	-22%
U.S. 340, Petersville	15,300	12,525	8,975	7,150		+22%
U.S. 340, South of Brunswick	12,000	9,400	8,350	8,200		+28%
Point of Rocks Road	6,300	4,400	4,850 (Souder Road)	3,200		+43%

Finally, Ninth Avenue provides a north-south connection from East B Street to Souder Road. Connections to Potomac Street can be made via East B Street or East A Street and Tenth Avenue. Tenth Avenue is characterized by steep vertical alignments and sharp curves.

East-west connections in Brunswick are limited, because of the steep north-south ravines cutting through the City. To the north, Route 17/Souder Road provides a two lane arterial connection between U.S. 340 and Point of Rocks Road. Potomac Street, along the City's southern boundary, provides the only other east-west connection through the City. East A Street and Brunswick Street are also important east-west connectors on the city's east and west sides, respectively. On the north side of the City, East H Street is the only east-west local connector, from Second Avenue to Ninth Avenue.

On the City's west side and in the downtown area, the street pattern has a consistent grid pattern. Grades on most of the north-south streets, such as First Avenue, Virginia Avenue, Delaware Avenue, Dayton Avenue, and Central Avenue, are quite steep. Most of the streets in these areas are of adequate width with curbs and gutters. However, on-street parking is more prevalent due to the smaller lot sizes and the lack of off-street parking on many lots. Therefore, the streets in these areas are often congested with parked vehicles as well as local traffic.

A characteristic road pattern in Brunswick are stub streets extending off main north-south connectors. These side streets were laid out as through east-west connections, but are discontinuous because of the steep ravines between the north-south roads. The resulting stub streets are problematic because of their narrowness, steep grades and the lack of turnarounds at their ends.

The streets in the newer subdivisions in Brunswick generally are of adequate width with curbs, gutters, and sidewalks. These subdivisions, such as Woodside Station and Manchester Village, were designed with the topography in mind, and were required to comply with modern grade and alignment standards.

Traffic Volumes

Traffic volume data for the major connectors in and around Brunswick indicates that traffic has increased steadily on area roads. In 1985 and 1990, traffic on U.S.340 increased by about 25 percent. A similar increase was measured on Petersville Road and the Route 17 Bridge. A significant increase on Point of Rocks Road was also measured. Traffic on Route 180, which is paralleled by U.S. 340, has declined since U.S. 340 was constructed.

Intersections

There are several problem intersections in the City of Brunswick. The most notable is the intersection of Petersville Road, East B Street, Maryland Avenue and the bridge over the Potomac River. Also in the downtown vicinity, the intersection of Maple Avenue and A Street is problematic because of the angle at which they intersect and confusion over the right of way. The intersection of Second Avenue and East D Street is difficult because of grades and alignments.

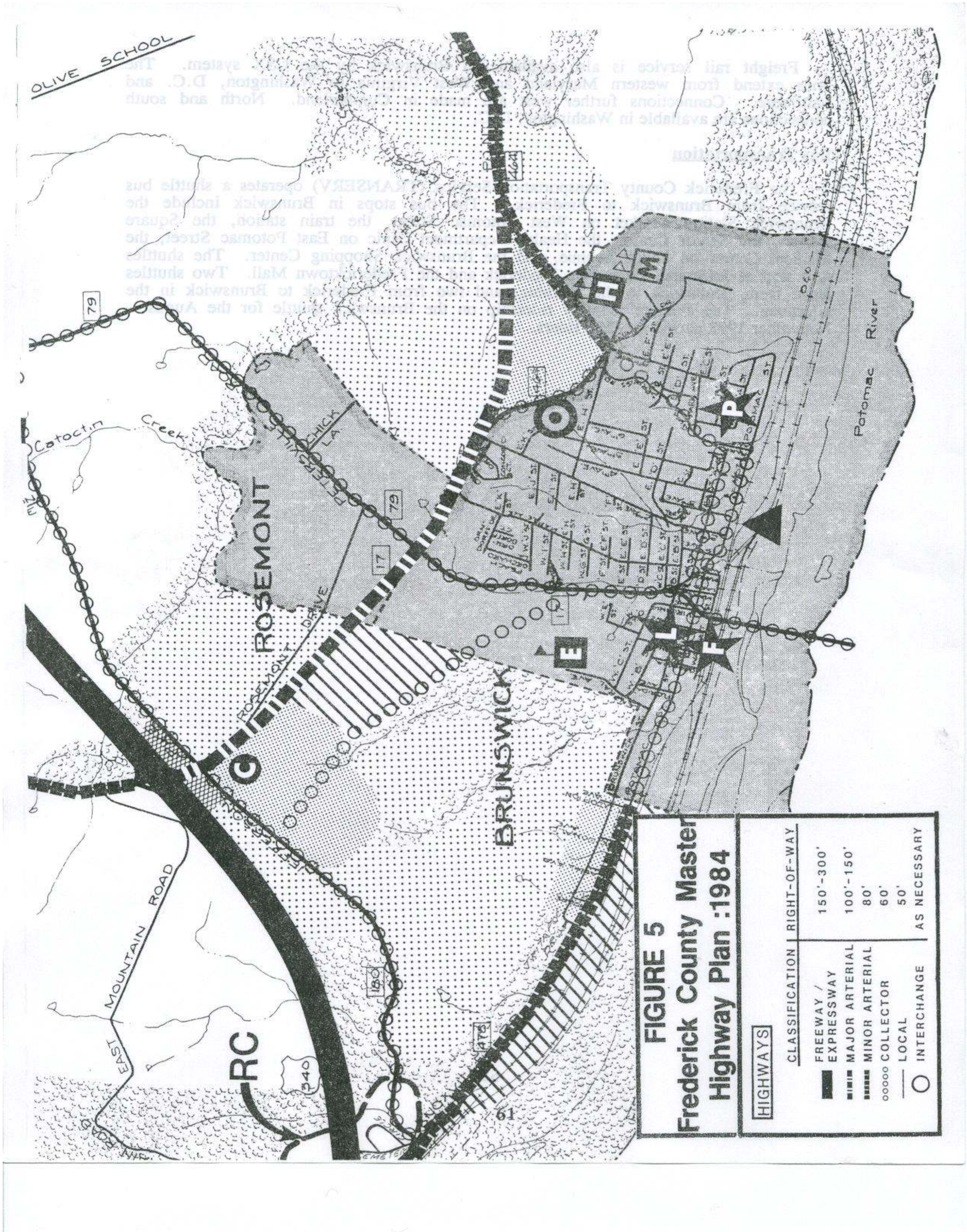
FIGURE 5
Frederick County Master Highway Plan :1984
HIGHWAYS
CLASSIFICATION
RIGHT-OF-WAY
FREEWAY / EXPRESSWAY
150'-300'
MAJOR ARTERIAL
100'-150'
MINOR ARTERIAL
80'
COLLECTOR
60'
LOCAL
50'
INTERCHANGE
AS NECESSARY
OLIVE SCHOOL
ROSEMONT
BRUNSWICK
EAST MOUNTAIN ROAD
ROSEMONT DRIVE
Catoctin Creek
Potomac River
RC
79
17
180
478
340
61

The intersection of Park Avenue, Gum Springs Road, and East A Street is another example of alignment and grade difficulties. Site distance is limited at the intersection of Maple Avenue and Souder Road. The rolling topography throughout the City causes site distance difficulties at many other intersections.

Frederick County Master Highway Plan

The Frederick County Master Highway Plan, part of the County Comprehensive Plan, includes recommendations for road classifications and alignments in the Brunswick area. The Plan classified all County roads in one of five categories: Freeway/ Expressway, Major Arterial, Minor Arterial, Collector, and Local. The particular function of a street was determined by several factors, including whether local traffic or through traffic is served, the type and intensity of proposed land uses, the street's relationship to the overall network, and the amount of traffic the street was expected to handle.

U.S. 340 in the Brunswick area was classified as a Freeway/Expressway. U.S. 340 provides highway access to Frederick, where it provides connections to U.S. 15, 1-270, and 1-70. To the southwest, U.S. 340 provides connections to Charlestown, West Virginia and northern Virginia.

Arterials provide the primary access to the freeway system and also supplement the freeway system by providing inter- and intra-county access through the more rural areas. Design standards for Major Arterials require a four lane road with a median, while design standards for Minor Arterials require well designed two lane facilities in rural areas and four lane facilities in urban areas. In the Brunswick area, the County Master Highway Plan shows a Major Arterial connection from U.S. 340 to MD 464, extending along Route 17 and Souder Road, and then following a new alignment between Souder Road and MD 464. MD 464 (Point of Rocks Road) and MD 478 (Knoxville Road) are designated as Minor Arterials on the Master Highway Plan.

Collector roads carry traffic from local streets to arterial roads and freeways. The Master Highway Plan designed several streets within Brunswick as collector roads: Petersville Road, Jefferson Pike (MD 180), Potomac Street, and A Street. A collector connection was shown between A Street at Park Avenue and the intersection of East H Street and Ninth Avenue, extending for the most part along Gum Springs Road. Another new collector connection was shown on the Plan extending from Petersville Road to MD 180, south of Route 17.

Rail Transportation

Brunswick is served by public rail transportation. The Maryland Rail Commuter Rail (MARC) provides service from Martinsburg, West Virginia to Union Station in Washington, D.C., with stops in Brunswick and Point of Rocks in Frederick County. Connections to the Washington Metro subway system can be made at the Rockville and Silver Spring stations as well as Union Station.

The average daily ridership on the MARC from the Brunswick Station in 1990 was 612 persons. This represents an 11% increase from 1989 and a 26% increase from 1988. In 1990, the 612 riders from Brunswick represented 25% of the riders using the Brunswick line (Martinsburg to Union Station), and the largest number of riders boarding at a single station. Many of the MARC riders from Brunswick live in Loudoun County, Virginia.

Commuters from Brunswick use the parking lots provided at the Brunswick Station. Because the ridership has increased and the parking lots are used to capacity, the State is planning to add 300 spaces to the parking lot. The parking lot currently accommodates about 400 vehicles. Construction of platforms at the station is also planned. Funding for construction of these projects was included the Mass Transit Administration capital budget for FY94 and FY95.

Freight rail service is also available in Brunswick by the CSX system. The lines extend from western Maryland and West Virginia to Washington, D.C. and Baltimore. Connections further west are made in Cumberland. North and south connections are available in Washington, D.C.

Bus Transportation

The Frederick County Transportation Service (TRANSERV) operates a shuttle bus service from Brunswick to Frederick. The bus stops in Brunswick include the Brunswick Station Market on West Potomac Street, the train station, the Square Corner, the Senior Center, the Health Department clinic on East Potomac Street, the Medical Center on Ninth Avenue, and the Brunswick Shopping Center. The shuttles also stop in Jefferson, downtown Frederick and the Fredericktown Mall. Two shuttles leave from Brunswick in the morning, and two from Frederick to Brunswick in the afternoon. The average monthly ridership on the Brunswick shuttle for the August November 1992 period was 525 riders.

Transportation Plan Proposals

The Master Plan proposals regarding transportation primarily focus on the road network which will be required to meet the future travel desires of residents, workers and through traffic. The purposes of the Plan proposals include: 1) To classify existing and planned roads according to their future function. Right-of-way widths, entrances, and intersection spacing is determined by the classification system. 2) To provide guidance to land owners and the general public by giving notice of the appropriate location of new roads as well as improvements to existing roads. 3) To recommend improvements to the existing road network.

It is important to recognize that the Plan road classifications are more dependent upon long-range land use patterns and development potential than upon anticipated population growth. Sufficient rights-of-way and alignments must be reserved whether one or all of the properties within the growth area develop in the immediate future.

Functional Classifications

The Plan proposes a hierarchy of roads to serve the Brunswick area: Freeways and Expressways, Major Arterials, Minor Arterials, Collectors and Local Roads. The particular function of a street is determined by several factors, including whether local traffic or through traffic is served, the type and intensity of proposed land uses, the street's relationship to the overall network, and the amount of traffic the street is expected to handle. The purpose of the system is to ensure the development of a logical and efficient network that complements the land use plan.

Freeways/Expressways are the primary and interstate limited access highways which provide inter-regional connections. Route 340 is the only Freeway/Expressway in the Brunswick area.
Arterials provide the primary access to the freeway system and supplement the freeway network

in rural areas. Major Arterials are designed to accommodate high traffic volumes. Design standards require a four lane road with a median. Within Brunswick, MD 17 is designated as a Major Arterial. Minor Arterials carry less traffic than Major Arterials. Design standards for Minor Arterials require well designated two lane facilities. Minor Arterials proposed on the Plan include West Potomac Street, Knoxville Road, and Petersville Road. Souder Road and MD 464 are also shown as Minor Arterials, with a new alignment of Souder Road proposed, connecting to MD 464 northeast of the existing City limits. The re-alignment would eliminate the sharp curve on Souder Road as well as the turn off of Souder Road onto MD 464.

Collectors are designed to carry traffic from local streets and subdivisions to arterial or freeway roadways. Three new collector connections are proposed on the west side of the City: an extension of Central Avenue north to MD 17, a road extending from Brunswick Street to MD 180, and a connection from that collector north to MD 17. Souder Road and MD 464, south of the new arterial, are shown as collectors as well. East Potomac Street and MD 180 are also shown as Collectors.

The Plan recommendations for roads are primarily implemented through the development process involving subdivision and site plan review. New developments are required to dedicate right-of-way along existing road frontages or for new road alignments that pass through the property. The functional classification system shown on the Plan map determines the amount of right-of-way needed and also identifies the approximate location of new road alignments.

Roads and Intersection Improvements

Parts of the street system in the older sections of Brunswick are characterized by narrow street widths, a lack of curb, gutters, and sidewalks, and steep grades. A number of intersections are problematic as well, mostly due to the number and angle of streets converging and steep grades. Many of the street and intersection problems would be difficult to solve due to constraints presented by existing development and topography. Some improvements can be made as properties are developed. However, since most of the lots in the older sections of the City are already developed, improvements through the development process cannot be relied upon.

The first step in improving the existing street and sidewalk system in Brunswick is assessing all of the streets and their intersections, and sidewalks to determine where improvements are needed and to establish priorities for making improvements.

The University of Maryland Transportation studies center has performed such a survey on behalf of the city through a grant the city obtained from the Maryland Office of Planning's and Department of Transportation's local Transportation Planning Assistance program. The survey inventoried the existing street pavement conditions, widths, curbs, gutters, sidewalks, and parking. The resulting street survey report and maps summarized the findings of the survey and made recommendations regarding the priorities for making improvements. A schedule for improvements was also proposed.

The University's survey results indicated that many of the City's streets appear to be in fairly good condition. However, the survey showed that much of the curb and gutter on the few City streets that contained them was in disrepair and in need of improvement. This also proved to be the case with the University's survey of the sidewalks. Parking problems were also identified,

especially in the downtown areas of the City near the MARC commuter station.

This Plan recommends that the City will undertake a regular program of improvements to streets, curbs, gutters, and sidewalks with reference to the results of the 1995 University of Maryland survey and recommendations. A plan to fund this program should be developed in conjunction with the City's annual review of its three year capital improvements plans.

It should be pointed out that the City's Code of Ordinances currently require that individual property owners install and repair sidewalks along City rights-of-way. However, this Plan recommends that the City should undertake a program to repair and install sidewalks along existing City streets as determined is necessary based on the findings of the University's survey.

This Plan also recommends that the parking situation in the downtown area needs to be studied further and recommendations made as to how it should be addressed.

While a few of the downtown street intersections were inventoried in the University's street survey, an assessment of street intersections was not a priority in the scope of work for this survey. Therefore this Plan also recommends that an assessment of street intersections and a traffic study of the downtown area be conducted. This study would identify problem intersections in the City as well as address two known problem intersections within the downtown area: the intersection of Petersville Road, Maryland Avenue, East B Street and the bridge to Virginia, and the intersection of Petersville Road, Maple Avenue, and East A Street.

The City's subdivision regulations provide design standards for road improvements or the development of new roads. These standards should be reviewed to insure their consistency with the classifications set forth in this Plan. The City should also develop a design manual providing engineering specifications for all aspects of road construction. Policies governing the improvements required when lots of record need to be established as well.

Transportation Policies and Recommendations

- *The City will undertake a regular program of improvements to streets, curbs, gutters, and sidewalks with reference to the results of the 1995 University of Maryland survey and recommendations.*

- *New transportation improvements will be designed to minimize the disruption to existing structures, historic sites and important natural and scenic features.*

- *The City will develop a design manual establishing standards for the construction of all road improvements. The standards set forth in the Subdivision Regulations will also be reviewed. The standards will be consistent with the functional classifications set forth in this Plan.*

- *The City will undertake a study of the downtown area to improve its accessibility and circulation pattern. Included in the study will be an assessment of street intersections as to their need for improvement. In addition, the downtown parking situation will be analyzed further and a*

downtown parking plan will also be developed.

- *The City will coordinate transportation planning with the County and State when County and State roads are involved.*

- *Adequate buffering and/or landscaping along Arterial roads will be provided to minimize noise and visual impacts on adjoining development.*

- *The City will undertake a study of alternative commuter routes and a designated truck route.*